The Thesis Committee for Taylor Anne Morgan
Certifies that this is the approved version of the following thesis:

The Ups and Downs of Variability: Are Fluctuating Relationship Appraisals Always Detrimental for Long-term Relationship Outcomes?

APPROVED BY
SUPERVISING COMMITTEE:

Supervisor:

Lisa A. Neff

Marci E. J. Gleason

Ted L. Huston

The Ups and Downs of Variability: Are Fluctuating Relationship Appraisals Always Detrimental for Long-term Relationship Outcomes?

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Taylor Anne Morgan, B.A.

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Abstract

The Ups and Downs of Variability: Are Fluctuating Relationship Appraisals Always Detrimental for Long-term Relationship Outcomes?

Taylor Anne Morgan, M.A.

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Supervisor: Lisa A. Neff

Variability in daily relationship satisfaction has been shown to undermine future relationship well-being. The current study suggests that the relationship climate may moderate this effect. Namely, and in light of prior work showing that ignoring relationship issues can be detrimental for long-term relationship well-being, it is argued that when the relationship is characterized by more negative relationship experiences, variability in daily satisfaction may actually represent an adaptive acknowledgement of those experiences. Seventy-eight newly-married couples completed a 10-day daily diary task which assessed the variability of daily marital satisfaction, the positive and negative marital events taking place each day, and the daily coping strategies used to manage negative marital events. Spouses then reported on their global marital happiness as well as the severity of their marital problems every six months over the first two and a half years of marriage. Results revealed that when the marriage was characterized by more negative than positive marital events (i.e., a more negative marital climate), greater variability in daily satisfaction predicted initially lower levels of global marital happiness

and more severe marital problems. However, greater variability in a more negative marital climate also was associated with less steep declines in global marital happiness and fewer increases in marital problems over time compared to low variability. Together, these findings suggest that variability in daily relationship satisfaction may temporarily feel unpleasant but over time may allow couples to address important relationship issues.

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INTRODUCTION

Over the course of a marriage, spouses inevitably encounter fluctuations in their day-to-day relationship experiences (e.g., McNulty & Karney, 2001). Whereas some days may be characterized by primarily positive experiences, other days may be characterized by greater levels of conflict and negativity. Consequently, maintaining satisfaction over the course of a long-term relationship hinges on the manner in which spouses respond to these fluctuating daily relationship experiences. For instance, minimizing the significance of daily relationship events should serve to protect relationship well-being from any negative experiences that may arise by promoting relationship evaluations that are more stable across time (Jacobson, Follette, & McDonald, 1982; Kelley, 1983). Conversely, allowing these ever-changing daily experiences to color one's overall relationship appraisal may undermine relationship well-being by creating feelings of relationship satisfaction that are quite precarious.

In fact, in his classic analysis of love and commitment, Kelley (1983) argued that greater variability in relationship appraisals over short periods of time signals a heightened sensitivity to changes in the perceived ratio of positive-to-negative relationship experiences. As such, greater variability in relationship appraisals should serve to destabilize relationships by fueling doubts about the future of the relationship. These doubts, in turn, can further increase hyper-vigilance for negative relationship events and encourage spouses to view such events as overly diagnostic of the broader

state of the relationship. In this way, variability in overall relationship appraisals can be conceptualized as both a source and an outcome of relationship difficulties. In other words, variability signifies both a "factual" response to changing relationship conditions as well as captures the "psychological turmoil" that can result from awareness of these changing conditions (Campbell, Simpson, Boldry, & Rubin, 2010).

Supporting Kelley's notions, recent studies have demonstrated that greater variability in day-to-day relationship appraisals predicts poor relational processes and outcomes, above and beyond mean levels of those appraisals. For instance, a 14-day daily diary study of dating and cohabitating couples confirmed that intimates whose daily relationship appraisals fluctuated more severely over the two week period not only perceived relationship problems as more threatening to the overall state of the relationship, but also were rated by independent observers as exhibiting worse conflict resolution behaviors during a lab interaction task (Campbell et. al, 2010). Perhaps for this reason, intimates who exhibit greater variability in their daily relationship appraisals also report lower levels of trust and commitment, as well as experience a greater likelihood of dissolution compared with intimates whose appraisals remain stable over time, even if those stable feelings are not particularly positive (Arriaga, 2001; Arriaga, Reed, Goodfriend, & Agnew, 2006; Campbell et al., 2010).

To date, then, greater variability in daily relationship appraisals is often portrayed as a maladaptive, hyper-scrutinizing response to specific relationship events that can undermine effective coping strategies when negativity arises. Yet, this focus on the deleterious effects of variability for relationship outcomes overlooks the possibility that,

under some conditions, a heightened sensitivity to changing relationship events may actually be adaptive. Growing evidence suggests that when negative relationship events are more frequent or severe, a closer scrutiny of those events may prove beneficial for the long-term health of the relationship by encouraging active coping efforts that prevent problems from worsening over time (McNulty, 2008; McNulty, O'Mara, & Karney, 2008). Accordingly, the goal of the current study is to examine whether the general marital climate may moderate the effects of day-to-day variability in relationship appraisals on long-term marital outcomes. Specifically, it is predicted that variability in daily relationship appraisals may be harmful in a marital climate characterized by low levels of relationship negativity but helpful in a marital climate characterized by a greater number of negative relationship experiences.

IS VARIABILITY ALWAYS DETRIMENTAL? THE MODERATING ROLE OF THE MARITAL CLIMATE

Although prior research indicates that variability is a hallmark of a problematic relationship (Arriaga, 2001; Campbell, et al., 2010), several other lines of research question this assumption. For instance, several recent studies have demonstrated that when the relationship is characterized by more frequent or severe relationship issues, relational processes that are traditionally considered to be 'adaptive' may fail to protect the relationship from declines over time (McNulty, 2008; McNulty, O'Mara, & Karney, 2008). One study of newlywed couples found that greater forgiveness, which is traditionally presumed to be a positive relationship quality, only predicted positive

marital outcomes when the partner rarely engaged in negative relationship behavior. If spouses had partners who frequently engaged in negative behavior, forgiving those transgressions actually led to steeper declines in satisfaction over the first two years of marriage (McNulty, 2008). Further work has demonstrated that dismissing negative relationship experiences when those experiences were more frequent provided couples with a short-term boost in marital satisfaction but allowed marital problems to fester and grow worse over time (McNulty, O'Mara, & Karney, 2008). Similarly, research examining couples' conflict resolution skills finds that although direct confrontation of relationship issues is initially distressing, it also can encourage partners to beget desired changes (Overall, Fletcher, Simpson, & Sibley, 2009). Indirect conflict tactics, on the other hand, are often associated with positive feelings toward the relationship in the short term but greater declines in satisfaction over time (e.g. Gottman & Krokoff, 1989). Together then, this work seems to suggest that although "adaptive processes" which serve to discount frequent or severe relationship problems may be associated with positive short-term outcomes, such a strategy may have long-term costs as it eliminates the opportunity for couples to potentially mend the relationship. Acknowledging the global implications of specific negative relationship experiences, however, may prompt necessary reparative efforts, which if successful can improve the relationship over time.

In a similar vein, variability in relationship appraisals, though often considered a form of maladaptive functioning, may actually be beneficial for some relationships. On the one hand, if the relationship climate is generally positive (i.e. negative experiences are relatively scarce), variability in relationship appraisals should be harmful for future

relationship well-being as it may represent an inability to reframe occasional specific negative events within a broader, long-term perspective of the relationship (Campbell et al., 2010; Kelley, 1983). In other words, in a positive climate, variability may indeed capture a kind of psychological turmoil that instills relationship insecurities and provokes ineffective responses to relationship issues. On the other hand, when the relationship climate is less positive (i.e., negative experiences are more frequent), variability in relationship appraisals may denote an accurate tracking of important, yet unfavorable changes in the relationship and thus could serve to promote more active efforts to cope with relationship difficulties. As a result, rather than fueling doubts in the relationship, a heightened sensitivity to negative relationship events in this context may have the somewhat counterintuitive effect of actually inspiring greater determination to persist in the relationship.

In fact, some work outside the area of close relationships has argued for the potential adaptive benefits of variability in appraisals. Traditionally, the self-esteem literature has argued that individuals who exhibit greater variability in self-esteem over short periods of time lack a well-anchored view of the self, and thus are subject to the vicissitudes of their daily positive and negative experiences. Consequently, unstable levels of self-esteem should be linked to a myriad of adverse personal outcomes (Greenier, Kernis, McNamara, Waschull, et al., 1999). However, recent work argues that when feelings of self-worth are sensitive to fluctuating experiences, this may enhance the motivation to alter one's behavior in response to a changing social environment. One study revealed that when faced with stressful interpersonal experiences, participants with

more variable self-concepts demonstrated greater flexibility in their behavioral responses, and thus were able to adapt more readily to those experiences, compared with participants exhibiting more stable self-concepts (Weise, 2011). Thus, this work provides some support for the notion that variability in appraisals may inspire greater coping efforts in response to stressful events.

OVERVIEW OF THE CURRENT STUDY

Variability in relationship appraisals has traditionally been presumed to be associated with negative relationship functioning, yet recent contextual models of relationships suggest that the impact of certain relationship processes and behaviors depends on the broader marital climate in which they operate. Drawing from this perspective, the current study aims at clarifying the circumstances under which variability in daily relationship appraisals may be more or less harmful for future relationship well-being. Specifically, the current study will extend prior work by examining the long-term effects of variability on marital outcomes over a two and a half year period and by taking into account the broader marital climate.

Newlywed couples participating in a broader study of marriage first provided information on their daily relationship satisfaction, the positive and negative behaviors exchanged with their partner each day, and the strategies they used to cope with daily relationship negativity as part of a 10-day daily diary task. Couples then continued to report on their global marital satisfaction and marital problems every six months over the next two and a half years. The use of a fairly homogeneous sample of newlywed couples

ensured that all couples were at a similar marital duration and that the motivation to maintain the relationship should be strong and fairly uniform across spouses.

Analyses of these data addressed three specific questions. First, does the marital climate moderate the effects of variability in daily relationship satisfaction on changes in overall marital happiness over the first two and a half years of marriage? Consistent with prior work (e.g., Campbell et. al, 2010), the current study will derive an index of variability by computing the standard deviation of spouses' daily marital satisfaction across the ten days of the diary task. It is expected that spouses' variability in daily satisfaction will interact with the negativity of the marital climate to predict changes in overall marital happiness over time. Namely, in marriages characterized by more positive than negative daily marital events (i.e., a more positive marital climate), greater variability in daily satisfaction should be associated with steeper declines in marital happiness over the first two and a half years of marriage. In a less positive climate, however, variability may represent a more adaptive response to changing marital events, and thus will be associated with fewer declines in marital happiness over the first two and a half years of marriage. In other words, variability may be especially detrimental to the relationship when it occurs in the context of a positive marital climate. Importantly, all findings should hold when controlling for the average level of spouses' daily relationship satisfaction across the ten-day period.

Second, does the marital climate interact with variability in spouses' daily relationship satisfaction to predict changes in the severity of marital problems over the first two and a half years of marriage? In light of prior work showing that ignoring

relationship issues can sometimes allow problems to worsen over time (e.g. McNulty, 2008), it is argued that when the relationship is characterized by more negative experiences, variability in daily relationship satisfaction may actually represent an adaptive acknowledgement of those experiences. Thus, it is predicted that greater variability in daily relationship satisfaction will be associated with decreases in marital problems over time when that variability occurs in a more negative compared to a more positive marital climate.

Third, does the marital climate moderate the effects of variability in daily relationship satisfaction on spouses' coping responses over the course of the diary days? In a relationship climate in which negative relationship experiences are relatively frequent, variability in daily relationship satisfaction may suggest that spouses are appropriately acknowledging relationship issues. This form of response may encourage more active coping efforts to effectively resolve relationship problems and improve the relationship over time (e.g., Weise, 2011). Accordingly, it is predicted that variability in a more negative marital climate will be associated with more positive marital coping strategies across the diary days. In a more positive marital climate, however, variability may signify psychological turmoil that should not be associated with positive marital coping strategies.

METHOD

PARTICIPANTS

The current study drew from a sample of 84 newlywed couples participating in a broader study of marriage. Couples were recruited for this study using several methods. First, advertisements were placed in community newspapers and with local wedding vendors (e.g., bridal shops, floral shops, etc.). Second, advertisements were placed on websites such as theknot.com and the social networking site *Facebook*. Third, premarital counselors were given fliers about the study to relay to potential participants. Couples responding to all methods of solicitation were screened in a telephone interview to determine whether they met the following eligibility requirements: (a) this was the first marriage for each partner, (b) the couple had been married less than six months, and (c) neither spouse had any children.

On average, husbands were 27.5 (SD = 4.6) years old and had completed 16.1 (SD=1.7) years of education. Eighty-two percent of husbands were employed full time and 9.5% were full time students. Wives averaged 25.6 (SD = 3.7) years old and had completed 16.3 (SD=1.4) years of education. Sixty-four percent of wives were employed full time, and 19% were full time students. Forty-nine percent of the sample was Christian and approximately 82% of spouses were white. The median income of couples was between $55,000 and $65,000 per year.

PROCEDURE

Within the first six months of their marriage, couples were contacted to complete two tasks relevant to the current study. First, couples completed a packet of questionnaires that included demographic information as well as self-report measures of global marital satisfaction and marital problems. Couples were paid $50 for completing this part of the study. Second, couples were asked to complete a 10-day daily diary task that assessed spouses' daily relationship satisfaction, daily positive and negative relationship events, and the strategies they enacted to cope with any negative relationship events. For this diary task, each spouse was given all 10 days of the diary along with a set of pre-stamped envelopes. Couples were instructed to independently fill out one diary each night before going to bed and to drop that diary in the mail the next morning. Couples were paid $25 for completing this part of the study.

Overall, 78 couples (93%) chose to participate in the daily diary portion of the study. Spouses who participated in the diary task did not differ from spouses who did not in any demographic variable, initial global marital satisfaction, or initial marital problems. Eighty-seven percent (68 husbands, 68 wives) of participants completed all 10 days of the diary. Ninety-nine percent (77 husbands, 78 wives) of participants provided at least three days of diary data. Spouses completing all 10 diary days did not differ from spouses providing less data in the variability of their daily relationship satisfaction, the average positivity/negativity of their daily relationship events, or the coping strategies used to manage negative relationship events. In all, husbands completed a total of 745 diary days and wives completed a total of 757 diary days. The postmarks of all diaries

were checked to confirm spouses' compliance with the diary instructions. A total of 89% (1,336) of diary days were returned with the correct postmark.

Following this initial session, couples were contacted to complete four additional follow-up assessments at six month intervals over the next two and a half years to determine change in marital quality over time. At each assessment, spouses were asked to report on their overall global marital satisfaction and marital problems. Couples were paid $50 for each of these follow-up assessments. At Time 5, the final wave of data collection, four couples (5%) had divorced or separated, and one couple (1%) had dropped out of the study due to time restrictions. Of the 79 couples who were still married and participating in the study, 68 couples (86%) returned completed packets at Time 5. Analyses were conducted to determine whether spouses who completed the final wave of data collection differed from spouses who did not on any of the variables of interest in the study. Results revealed no significant differences. Importantly, however, as data were examined through growth curve modeling, participants who did not provide all five waves of data (i.e., participants who had missing data or divorced during the study) could be included in all analyses (Raudenbush, Brennan, & Barnett, 1995). Thus, the current study utilized data from all 78 couples who completed the diary task.

MATERIALS

Global Marital Happiness

Many commonly used measures of marital satisfaction (e.g. the Marital Adjustment Test; Locke & Wallace, 1959) contain items that assess spouses' evaluations

of specific areas of potential conflict as well as items assessing spouses' appraisals of the relationship as a whole. To ensure these two ideas were not confounded in the current study, general marital satisfaction was measured at all five assessments with an instrument that obtains global evaluations of the relationship exclusively. Specifically, spouses completed the 16-item version of the Couples Satisfaction Index (Funk & Rogge, 2007), a measure that has demonstrated a greater responsiveness to changes in satisfaction than many other existing scales. Scores on the measure can range from 16-111, with higher scores indicating greater marital happiness. Internal consistency of the measure was high across the five assessments, ranging from .90 to .97 for both spouses.

Severity of Marital Problems

The severity of marital problems was assessed at all five assessments using the Marital Problems Inventory (Geiss & O'Leary, 1981). This measure lists 19 potential problem areas in a marriage (e.g., communication, solving problems, making decisions, trust, jealousy, showing affection, sex) and asks participants to rate each item on a scale from 1 (*not a problem*) to 11 (*major problem*). Composite scores could range from 19 to 209, with higher scores representing more severe marital issues. Internal consistency of the measure was high across the five assessments, ranging from .88 to .91 for husbands and from .82 to .85 for wives.

Daily Diary

The daily diary assessed three phenomena of interest to the current study.

Daily Relationship Satisfaction: Mean Level and Variability

Three items modified from the Kansas Marital Satisfaction Scale (Schumm, Paff-Bergen, Hatch, & Obiorah, 1986) were used to measure spouses' daily satisfaction with their marital relationship. These questions are, "How satisfied are you with your partner today?" "How satisfied are you with your relationship today?" and, "How satisfied are you with your marriage today?" Participants responded to all items on a 7-point Likert scale ranging from 1 (*very unsatisfied*) to 7 (*very satisfied*). The internal consistency of the measure was high across days, ranging from .93 to .98 for husbands, and from .89 to .98 for wives. A summed composite score was created for each spouse on each day, with higher scores indicating greater satisfaction. These daily scores were used to calculate spouses' mean level of satisfaction as well as variability in satisfaction across the diary days. Consistent with prior work (Campbell, et al., 2010; Graham & Clark, 2006; Kernis, Grannemann, & Barclay, 1989), variability was assessed by computing the standard deviation of spouses' mean daily satisfaction over the course of the diary task.

Daily Relationship Events: Marital Climate

To assess the marital climate, spouses were presented with a checklist of six positive and five negative relationship behaviors and asked to indicate whether any of the behaviors took place that day. Examples of negative behaviors include: "Your spouse showed anger or impatience toward you," "Your spouse criticized/blamed you." Examples of positive behaviors include: "Your spouse listened to or comforted you," "Spouse said something that made you feel loved." Summed composite scores were created for both positive behaviors and negative behaviors for each spouse across the ten

diary days. Next, to create a score of the overall marital climate across the diary days, the total number of negative events was divided by the total number of positive events. Thus, the final marital climate score for each spouse represents the proportion of the total number of negative relationship events to the total number of positive relationship events reported across the diary days. Higher scores indicate a more negative marital climate.

Daily Marital Coping Strategies

Each day, spouses were asked to indicate whether they engaged in active coping efforts to resolve daily relationship negativity using a single item (e.g., "I talked to my partner and tried to work through the problem with him/her."). Spouses responded on a dichotomous scale (1 = yes and 0 = no). To assess spouses' total coping efforts across the diary days, a summed score across the ten days was calculated, with higher scores indicating more active, positive coping efforts.

DATA ANALYSIS

Examining whether variability in daily relationship satisfaction predicts changes in spouses' global marital quality over time required both within-subject and between-subjects analyses. For instance, a within-subject approach allowed us to examine the trajectory of spouses' global marital happiness over the first two and a half years of marriage. The between-subjects approach allowed us to evaluate whether the slope of this trajectory is predicted by the interaction of spouses' variability in day-to-day satisfaction and the general marital climate.

To address both the within-subject and between-subjects hypotheses, data were examined using Hierarchical Linear Modeling (HLM; Bryk, Raudenbush, & Congdon, 1994). This approach was adopted for several reasons. First, in contrast to other approaches to analyzing multilevel models (e.g., structural equation modeling), HLM provides reliable estimates of within-subject parameters even when sample sizes are relatively small. Second, HLM provides maximally efficient estimates of these parameters by weighting individual estimates according to empirical Bayes theory. When the within-subject parameter for an individual can be estimated precisely, the final estimate relies heavily on the individual data. When the parameter cannot be estimated precisely (e.g., because of missing data), the final estimate relies more heavily on the mean of the sample. Because the most precise estimates therefore contribute more to the final estimated variance of the sample, variances estimated in this way tend to be more conservative than those obtained through traditional OLS methods.

To account for statistical interdependence within couples, we followed procedures described by Laurenceau and Bolger (2005), which are based on recommendations by Raudenbush, Brennan, and Barnett (1995). Specifically, husbands' and wives' effects were estimated simultaneously for all analyses and dummy variables were used to nest husband and wife data within each couple. This approach allowed for straightforward tests of gender differences in coefficients of interest (a 1-*df* χ^2 test). In cases where no significant gender differences were found, we constrained the coefficients to be equal for husbands and for wives, according to procedures outlined by Barnett, Marshall, Raudenbush and Brennan (1993; see also Murray, Griffin, Rose, & Bellavia, 2006). The

significance test of such a constrained coefficient is more powerful than tests for gender-specific coefficients (Barnett, et al., 1993). Thus, in the absence of gender differences, we report these constrained coefficients.

RESULTS

DESCRIPTIVE STATISTICS AND CORRELATIONS

Table 1 presents descriptive statistics for measures of global marital happiness and severity of marital problems at each of the five waves of data collection. Not surprisingly, on average these newlyweds generally were highly satisfied with their marriage and reported low to moderate levels of marital problems over the course of the two- and-a-half-year period. Table 2 presents descriptive statistics for the daily diary measures. Again, on average, spouses reported high levels of daily relationship satisfaction. Recall that the marital climate represents the proportion of total negative to total positive relationship events reported across the diary days. Thus, a score of one indicates the spouse reported the same number of positive and negative relationship events across the diary days. A marital climate score less than one indicates the spouse reported more positive than negative relationship events across the diary days, whereas a score greater than one indicates the spouse reported more negative than positive relationship events across the diary days. On average, spouses reported more positive than negative daily relationship experiences with their partner. Importantly, however, spouses also reported considerable variability in their daily relationship satisfaction across the diary days. Notably, six spouses reported either a variability score or a marital climate score that was almost four standard deviations away from the mean. After reviewing the raw data, it appears that these six spouses may have incorrectly completed the diary surveys. For example, one husband reported high marital satisfaction most days of the ten diary days, but on one day, he answered every question with the first response.

These six individuals were dropped from subsequent analyses. To examine for possible gender differences on any of the variables of interest, paired sample t-tests were conducted. Only two gender differences emerged. First, wives reported higher levels of initial global marital happiness than did husbands (t (72) = 2.78, p = .01, 95% CI [.93, 5.65]). Second, wives reported significantly more positive relationship events across the diary days than did husbands (t (72) = 2.60, p = .01, 95% CI [.67, 5.11]).

Table 3 presents the within-spouse and between-spouse correlations for all measures assessed at the beginning of the marriage (e.g., initial global marital happiness, initial severity of marital problems, and all diary measures). Starting with the within-spouse correlations, variability in daily relationship satisfaction was significantly negatively correlated with initial levels of global marital happiness for husbands only, such that husbands exhibiting greater variability in daily relationship satisfaction reported lower levels of overall marital happiness. Additionally, variability in daily relationship satisfaction was significantly positively correlated with initial severity of marital problems and the marital climate for both husbands and wives. As seen in the table, spouses who fluctuated more in their daily relationship satisfaction also reported experiencing more severe marital problems and more negative marital climates overall. Finally, variability in daily relationship satisfaction was also significantly positively correlated with total active coping behaviors enacted during the diary period for both husbands and wives, such that spouses exhibiting greater variability in daily relationship satisfaction also engaged in more active marital coping efforts across the diary days. In sum, it appears that spouses who exhibited greater variability in daily relationship

satisfaction began their marriage with lower global marital happiness, more marital problems, and more negative marital climates but also engaged in more active coping efforts to resolve the issues at hand.

The general marital climate across the diary days was significantly negatively associated with initial levels of global marital happiness, such that spouses experiencing a more negative marital climate also reported lower levels of initial global marital happiness. Moreover, the marital climate was significantly positively associated with initial severity of marital problems reported for husbands only. In other words, husbands who reported experiencing a more negative marital climate across the diary days also reported more severe marital problems at the start of their marriage. Finally, the general marital climate also was significantly positively correlated with total active coping for husbands only, such that husbands experiencing a more negative marital climate reported enacting more active coping behaviors during the diary period.

Turning to the between-spouse correlations, husbands' and wives' reports of initial global marital happiness, the general marital climate, and variability in daily relationship satisfaction during the diary period were significantly positively correlated, suggesting that spouses generally held similar appraisals of the relationship. Furthermore, total active coping behaviors were significantly positively correlated between spouses, such that spouses who reported enacting more active marital coping behaviors tended to have partners who also utilized active coping strategies. Overall, then, these initial results indicate that all measures performed generally as expected.

DOES THE MARITAL CLIMATE MODERATE THE EFFECTS OF VARIABILITY IN DAILY SATISFACTION ON CHANGES IN MARITAL HAPPINESS OVER TIME?

The first goal of the study was to examine whether the marital climate may interact with variability in daily relationship satisfaction to predict changes in global marital happiness over the first two and a half years of marriage. Consistent with prior research (e.g., Arriaga, 2001), it was predicted that in a positive marital climate, greater variability in daily relationship satisfaction should be associated with steeper declines in marital happiness over the first two years of marriage. In other words, when the number of daily positive relationship events outweighs the number of daily negative relationship events, variability in daily relationship satisfaction may represent a hypervigilance for threatening information, leading to a deterioration in marital quality over time. However, in a negative marital climate, variability in daily relationship satisfaction may be associated with less steep declines in global marital happiness. In this case, variability may represent a more accurate tracking of relationship events, which should allow spouses an opportunity to rectify important problems. To examine this possibility, the slope of marital happiness over the two and a half year period was first estimated at the within-person level of analyses using the following HLM model:

Marital Happiness = b_{1j} (husbands) + b_{2j} (wives) + b_{3j} (husbands' time) +

b_{4j} (wives' time) + error

[Equation 1a]

In this equation, b_{1j} and b_{2j} represent an estimate of a spouse's initial level of marital happiness, while b_{3j} and b_{4j} capture the slope of a spouse's marital happiness over time.

On average (pooled across gender), global marital happiness significantly declined over the first 2 ½ years of marriage (b = -1.83, SE = 0.40, t (72) = -4.56, p < .001, 95% CI [-2.61,-1.05]).

Next, variability in daily relationship satisfaction, the negativity of the marital climate, and their interaction were entered at the between-subjects level of the model, as outlined below. Importantly, and consistent with prior research (e.g., Arriaga, 2001; Campbell et al., 2010), spouses' mean level of daily relationship satisfaction across the diary days was included as a control variable.

b_{1j} (husbands' initial global happiness) = γ_{10} + γ_{11}(husbands' mean level of daily satisfaction) + γ_{12}(husbands' variability in daily satisfaction) + γ_{13}(husbands' marital climate) + γ_{14}(husbands' variability*marital climate) + error

b_{2j} (wives' initial global happiness) = γ_{20} + γ_{21}(wives' mean level of daily relationship satisfaction) + γ_{22}(wives' variability in daily satisfaction) + γ_{23}(wives' marital climate) + γ_{24}(wives' variability*marital climate) + error

b_{3j} (husbands' slope of global happiness) = γ_{30} + γ_{31}(husbands' mean level of daily satisfaction) + γ_{32}(husbands' variability in daily satisfaction) + γ_{33}(husbands' marital climate) + γ_{34}(husbands' variability*marital climate) + error

b_{4j} (wives' slope of global happiness) = γ_{40} + γ_{41}(wives' mean level of daily satisfaction) + γ_{42}(wives' variability in daily satisfaction) + γ_{43}(wives' marital climate) + γ_{44}(wives' variability*marital climate) + error

[Equations 1b-1e]

Thus, Equations 1a through 1e were estimated in a single model. To facilitate interpretations of coefficients, spouses' mean level of daily marital satisfaction, variability in daily marital satisfaction, and the marital climate were entered as standardized scores. For the purpose of these analyses, the final two equations contain the primary parameters of interest, γ_{34} and γ_{44}. These equations capture the association between changes in global marital happiness over time and the interaction of the marital climate and the variability in daily relationship satisfaction, controlling for the average level of daily relationship satisfaction.

Results of this model are presented in Table 4. As seen in the top half of the table, an unexpected significant effect of the interaction on initial levels of happiness did emerge. This interaction was examined more closely using procedures outlined by Aiken and West (1991) for two continuous variables, with comparisons made at 1 *SD* from the mean. Figure 1 portrays the overall pattern of results. Out of the four possible simple slopes, only one emerged as marginally significant (see top half of Table 5). In a negative marital climate, there was a trend, such that spouses higher in variability in daily relationship satisfaction reported lower initial global marital happiness than did spouses lower in variability.

Turning to the primary hypothesis, the interaction between variability in daily satisfaction and the general marital climate also was significantly associated with changes

in global marital happiness over the early years of marriage[1] (see bottom half of Table 4). As seen in Figure 2, the overall pattern of results was generally consistent with predictions. Simple slope analyses (see bottom half of Table 5) revealed two significant effects. First, as predicted, for spouses experiencing a more negative marital climate, high variability predicted fewer declines (i.e., more stable levels) of marital happiness over the early years of marriage compared to lower levels of variability. In other words, in a negative marital climate, variability in daily relationship satisfaction was associated with better marital quality over time. Moreover, among spouses who exhibited low variability in daily satisfaction, those experiencing a negative marital climate reported steeper declines in global marital happiness compared to those in a positive marital climate. Together, these two effects are consistent with the idea that spouses who exhibit low variability in a negative climate may be ignoring important issues that later lead to declines in marital quality. Contrary to predictions, no significant differences emerged between spouses who exhibited high variability versus low variability in changes in global marital happiness over time in a positive climate. Moreover, the slope of high variability was not significant. Thus, these results failed to replicate previous findings, which suggest that greater variability should generally be harmful for relationship outcomes (e.g., Arriaga, 2001; Campbell et al., 2010).

[1] The same analysis was conducted using a slightly different measure of the marital climate. Here, we created a proportion of the total number of negative relationship events across the diary days to the total number of both positive and negative relationship events across the diary days. A higher score indicates a more negative marital climate. The results were similar to our original findings. First, a significant effect of the interaction on initial levels of happiness did emerge ($b = -2.56$, $SE = 1.15$, $t(72) = -2.22$, $p < .05$, 95% CI [-4.81,-0.31]). Furthermore, the interaction between variability in daily satisfaction and the general marital climate also was significantly associated with changes in global marital happiness over the early years of marriage ($b = 0.64$, $SE = 0.28$, $t(72) = 2.28$, $p < .05$, 95% CI [0.09,1.19]).

Further analyses were conducted to ensure these results remained significant when controlling for the total number of positive relationship events and the total number of negative relationship events reported across the diary days. To do this, these two control variables were added to the between-subjects level of the model (i.e., Equations 1b-1e). Neither the total number of positive relationship events reported nor the total number of negative relationship events reported predicted initial levels of global marital happiness, b=-0.16, SE=0.96, $t(67)$=-0.17, p=0.87, 95% CI [-2.04, 1.72], and b=-1.11, SE=1.17, $t(67)$=-0.94, p=0.35, 95% CI [-3.40, 1.18], respectively, or changes in global marital happiness over time, b=-0.07, SE=0.41, $t(67)$=-0.16, p=0.88, 95% CI [-0.87, 0.73], and b=-0.03, SE=0.48, $t(67)$=-0.05, p=0.96, 95% CI [-0.97, 0.91], respectively. All results held when including these control variables.

DOES THE MARITAL CLIMATE MODERATE THE EFFECTS OF VARIABILITY IN DAILY SATISFACTION ON CHANGES IN THE SEVERITY OF MARITAL PROBLEMS OVER TIME?

The second goal of the study was to examine whether the marital climate interacted with variability in daily relationship satisfaction to predict changes in the severity of marital problems over the early years of marriage. It was predicted that in a more negative marital climate, high variability in daily relationship satisfaction might represent an acknowledgement of relationship issues needing attention in order to improve the relationship. Conversely, low variability may represent an avoidance of those issues, which can allow those issues to fester over time. Thus, spouses who maintain greater variability in a negative climate may exhibit fewer increases in future

marital problems compared to spouses who maintain lower variability. Alternatively, in a more positive marital climate, or an environment in which negative relationship events are relatively scarce or mild, variability in daily relationship satisfaction may represent over-reactions to minor relationship difficulties. Here, fluctuating relationship satisfaction may signal underlying psychological turmoil that should undermine the relationship over time. Thus, in a more positive marital climate, variability in daily relationship satisfaction should lead to increases in marital problems over time. To examine these possibilities, the slope of marital problems over time was first estimated at the within-person level of analyses using the following HLM model:

Marital Problems = b_{1j} (husbands) + b_{2j} (wives) + b_{3j} (husbands' time) +

b_{4j} (wives' time) + error

[Equation 2a]

In this equation, b_{1j} and b_{2j} represent an estimate of spouses' initial severity of marital problems, while b_{3j} and b_{4j} capture the slope of marital problems over time. On average, the severity of marital problems did not significantly change over the first two a half years of marriage (b = 0.47, SE = 0.43, t (72) = 1.10, p =0.27, 95% CI [-0.37,1.31]). At the between-subjects level, equations 1b-1e (see above) remained the same.

Results of this model are presented in Table 6. Again, though it was not predicted, a significant effect of the interaction between variability and marital climate on initial severity of marital problems emerged (see top half of Table 6). This interaction was examined more closely using procedures outlined by Aiken and West (1991) for two continuous variables, with comparisons made at 1 *SD* from the mean. Figure 3 presents

the interaction between variability in daily satisfaction and the marital climate on initial levels of severity of marital problems. Simple slope analyses (see top half of Table 7) revealed two significant (or marginally significant) simple slope effects. First, spouses higher in variability in daily relationship satisfaction reported significantly more severe marital problems at the start of their marriage when that variability took place in a negative marital climate compared to a positive marital climate. Second, a trend emerged, such that in a more negative marital climate, spouses exhibiting higher variability in daily relationship satisfaction also tended to report more severe marital problems at the start of their marriage compared to spouses exhibiting lower variability in daily relationship satisfaction.

Turning to the primary hypothesis, the interaction of variability in daily satisfaction and the general marital climate also was significantly associated with changes in the severity of marital problems over the early years of marriage[2] (see bottom half of Table 6). As seen in Figure 4, the overall pattern of results was generally consistent with predictions and similar to the pattern of results for global marital happiness. Out of the four possible simple slope effects, two emerged as significant (see bottom half of Table 7). First, as expected, for spouses experiencing a more negative marital climate, high variability was associated with less pronounced increases in marital problems over the

[2] Again, the same analysis was conducted using the proportion of the total number of negative relationship events across the diary days to the total number of both positive and negative relationship events across the diary days. The results were similar to our original findings. First, a significant effect of the interaction on initial severity of marital problems did emerge ($b = 5.64$, $SE = 2.40$, $t(72) = 2.35$, $p < .05$, 95% CI [0.94,10.34]). Furthermore, the interaction between variability in daily satisfaction and the general marital climate also was significantly associated with changes in marital problems over the early years of marriage ($b = -1.52$, $SE = 0.51$, $t(72) = -2.99$, $p < .01$, 95% CI [-2.52,-0.52]).

early years of marriage compared to low variability. In other words, in a negative marital climate, high variability was again associated with better marital quality over time compared to low variability. Moreover, among spouses who exhibited low variability in daily satisfaction, those experiencing a negative marital climate reported greater increases in marital problem severity compared to those in a positive marital climate. These findings build on prior research (e.g. McNulty et al., 2010) suggesting that ignoring frequent relationship negativity may allow problems to worsen over time. Contrary to predictions, high variability was not significantly associated with changes in marital problem severity over time. Furthermore, no significant differences emerged between spouses exhibiting high variability versus low variability in changes in marital problem severity over time in a positive climate.

Further analyses were conducted to ensure these results remained significant when controlling for the total number of positive relationship events and the total number of negative relationship events reported across the diary days. To do this, these two control variables were added to the between-subjects level of the model (i.e., Equations 1b-1e). Neither the total number of positive relationship events reported nor the total number of negative relationship events reported predicted initial severity of marital problems, b=3.88, SE=2.38, $t(67)$=1.68, p=0.10, 95% CI [-0.78, 8.54], and b=3.24, SE=2.99, $t(67)$=1.09, p=0.28, 95% CI [-2.62, 9.10], respectively, or changes in severity of marital problems over time, b=-0.56, SE=0.57, $t(67)$=-0.98, p=0.33, 95% CI [-1.68, 0.56], and b=0.05, SE=0.65, $t(67)$=0.07, p=0.94, 95% CI [-1.22, 1.32], respectively. All results held when including these control variables.

DOES THE MARITAL CLIMATE MODERATE THE EFFECTS OF VARIABILITY IN DAILY SATISFACTION ON MARITAL COPING STRATEGIES?

Given that some evidence supported the idea that high variability in a negative marital climate may prove beneficial for future marital quality, the final goal of the study was to explore a possible mechanism for this effect. Specifically, it was predicted that spouses who exhibited greater variability in daily relationship satisfaction in a more negative marital climate would also report enacting the most positive coping strategies to resolve marital issues. To examine this idea, we estimated the following HLM equation:

Total positive marital coping strategies = b_{0j} + b_{1j} (mean level of daily satisfaction) + b_{2j} (variability in daily satisfaction) + b_{3j} (marital climate) + b_{4j} (variability*marital climate) + b_{5j} (gender) + error

[Equation 3a]

As all variables used in this analysis were assessed at the between-subjects rather than the within-subject level, all predictor variables were centered around the mean of the sample and gender was effect coded (1 for men, -1 for women), according to procedures outlined by Campbell and Kashy (2002). Thus, this equation predicts spouses' cumulative marital coping over the diary period from the degree of variability in spouses' relationship satisfaction (b_{2j}), the marital climate (b_{3j}) and their interaction (b_{4j}), controlling for the average level of relationship satisfaction (b_{1j}). The resulting Level 2 model for the previous equation was as follows:

$b_{0j} = \gamma_{00}$+ error;

$b_{1j} = \gamma_{10}$

$$b_{2j} = \gamma_{20}$$

$$b_{3j} = \gamma_{30}$$

$$b_{4j} = \gamma_{40}$$

$$b_{5j} = \gamma_{50}$$

[Equations 3b-3g]

Thus, the intercept was specified as a function of both a fixed and random component. However, no random component was specified for any of the slope parameters, a required constraint given the fact that each couple involves only two individuals (Kenny, Kashy, & Cook, 2006). Importantly, a model was also run in which the interactions between gender and each of the predictor variables were added in order to test for any gender differences. As no gender differences emerged, all results presented are pooled across gender. Table 8 presents the results of the model. The only significant effect to emerge was a main effect of the marital climate, such that spouses experiencing a more negative marital climate reported enacting more positive coping behaviors across the diary days. A marginal main effect of variability also emerged, such that spouses exhibiting greater variability in daily relationship satisfaction reported enacting more positive coping behaviors. Contrary to predictions, however, the interaction of the marital climate and variability in daily relationship satisfaction did not predict coping behaviors.

DISCUSSION

RATIONALE AND SUMMARY OF RESULTS

Traditionally, theorists have assumed that variability in daily satisfaction represents a hyper-vigilance to negative relationship information that can undermine positive relationship outcomes. Supporting this idea, prior work has linked variability in relationship appraisals with a variety of poor relationship outcomes, including lower commitment and trust, and a greater likelihood of relationship dissolution (Arriaga, 2001; Arriaga et al., 2006; Campbell et al., 2010). However, this characterization of variability may only be accurate when that variability occurs in a generally positive marital climate. In other words, variability should be harmful when there are few negative events taking place in the relationship; here, variability may indeed capture a maladaptive tendency to make mountains out of molehills. Yet some recent findings suggest that in a more negative marital climate, variability may operate differently. Specifically, when, negative relationship experiences are frequent or severe, a careful monitoring of negative information can actually be adaptive (e.g., McNulty, 2010). In light of these findings, the goal of the current study was to determine if the effects of variability in daily relationship satisfaction on marital quality may depend on the broader marital climate.

To accomplish this goal, the first aim of the current study was to examine whether variability in daily satisfaction interacted with the marital climate to predict the trajectory of marital quality during the first two and a half years of marriage. Results revealed that this interaction was associated with both the intercept and slope of marital quality over time. Starting with the intercept effects, the marital climate moderated the effects of

variability in daily relationship satisfaction on initial levels of marital quality. Specifically, in a negative marital climate, spouses higher in variability in daily relationship satisfaction reported lower global marital happiness and more severe marital problems at the start of their marriage compared to those lower in variability. However, turning to our primary hypothesis and consistent with predictions, for spouses experiencing a negative marital climate, high variability in daily relationship satisfaction also was associated with less steep declines in global marital happiness and fewer increases in marital problems over the first two and a half years of marriage. Together, these findings are consistent with the idea that in a more negative climate, an accurate tracking of negative relationship events may yield short-term costs, but long-term benefits (e.g., McNulty, 2008); although a vigilance for relationship negativity may initially be unpleasant, perhaps this vigilance provides couples experiencing high levels of relationship negativity the opportunity to mend their relationship.

The second aim of the current study, then, was to examine a potential mechanism underlying the association between variability in a negative marital climate and more positive long-term relationship quality - marital coping. In other words, it was predicted that in a negative marital climate, spouses exhibiting higher levels of variability should also be engaging in more positive coping efforts to resolve marital issues. Unfortunately, the current study did not find evidence to support this idea. This lack of an association between variability in a negative marital climate and positive marital coping efforts is not entirely surprising, however, when one considers the measure of coping efforts used in the study. This measure was limited in that it (a) was comprised of a single item and (b)

only assessed positive coping efforts. In other words, our test assumed that once negativity was acknowledged, spouses would engage in *constructive* coping responses. Yet, not all spouses may be skilled at coping with marital stressors. Rather, spouses who exhibit high variability in a negative marital climate may be noticing negative relationship events and responding to those events with a wide variety of both positive and negative coping behaviors. This possibility is consistent with a recent study examining the effects of variability in self-esteem on well-being (Weise, 2011). This research found that individuals with more variable self-concepts were able to adapt more easily to their social environments due to their more flexible coping strategies. Future research should explore this possibility within the relationships domain by examining the links between variability in daily satisfaction and a wider range of coping behaviors.

Turning to the role of variability in a positive marital climate, the current study failed to replicate prior findings (e.g., Arriaga, 2001; Campbell et al., 2010) showing that variability in daily relationship satisfaction is associated with poor relationship quality. First, no main effect of variability in daily relationship satisfaction on long-term marital quality emerged. Moreover, even within a positive marital climate, we found no indication that variability in daily relationship satisfaction was associated with poor long-term marital outcomes. One possible explanation for these null effects is that the current study looked at trajectories of marital quality over two and a half years, longer than any previous study examining fluctuations in relationship satisfaction. Thus, it may be that short-term fluctuations in relationship satisfaction may incur short-term harms but may not affect longer-term relationship outcomes. Furthermore, the current study examined

newlywed couples, a highly committed and highly satisfied sample of couples. Perhaps newlyweds are more resilient to the harmful effects of variability in daily relationship satisfaction as they are in an especially happy and "honeymoon" phase of the relationship.

STRENGTHS AND LIMITATIONS

A number of strengths in the methodology and design of the current study serve to heighten our confidence in the results. Foremost among these strengths is the use of longitudinal data which allowed us to examine the association between variability and relationship outcomes over 2.5 years of marriage. Previous studies have looked at the effects of variability over several months (e.g., Arriaga, 2001; Arriaga et al., 2006), but a longer time frame can provide a better understanding of how these processes affect the development of relationships over time. Examining the effects of variability over 2.5 years allowed us to untangle immediate effects of variability from long-term effects. This is an important issue as growing research is showing that what may be beneficial in the present may not always prove helpful in the future (e.g., McNulty, 2008). Second, also in contrast to much prior research that has addressed samples varying widely in marital duration, the analyses reported here examine data from a relatively homogeneous sample of recently married couples, reducing the likelihood that the effects observed here result from uncontrolled differences in marital duration. Moreover, the use of a fairly homogeneous sample provided a more conservative test of our hypotheses.

Despite the noted strengths, several limitations exist in the current study. First, the restricted quantity of data that could be obtained through the diary greatly limited our measure of positive marital coping strategies. A daily diary design requires the use of short and easy-to-complete measures in order to prevent participant attrition. We assessed positive marital coping strategies using a single item, yet the one item may not capture the gamut of responses to marital stressors. A more comprehensive measure of positive coping efforts may have potentially revealed a link between variability in a negative marital climate and more constructive coping strategies. Second, while also an important strength, the use of a fairly homogeneous sample limits the interpretation of our findings. For example, the current sample consisted of primarily White, highly educated couples. Thus, generalizations to other samples should be made with caution. Third, the current study utilized a relatively small sample size, decreasing the power of our analyses. This problem was particularly relevant when testing the simple slope effects underlying the significant interactions found in the current data. Nevertheless, the fact that many of our predictions were supported, despite the conservative nature of our tests, suggests the current findings are robust.

CONCLUSION

Many relationship behaviors traditionally assumed to be maladaptive may actually prove to be a boon for relationship quality under certain circumstances. The current study suggests that the implications of variability in daily relationship satisfaction depend on the broader marital climate in which that variability takes place. Specifically, when the marital climate is characterized by more negative than positive relationship events, variability in relationship satisfaction may actually encourage spouses to attend to the relationship issues at hand. Distinguishing when variability in relationship appraisals

is harmful versus beneficial is important for understanding how day-to-day changes affect long-term relationship quality.

Table 1

Means and Standard Deviations for the Marital Quality Measures

Spouse	Time 1	Time 2	Time 3	Time 4	Time 5
			Global Marital Happiness		
Husbands					
M	98.63	95.86	95.76	94.93	93.76
SD	11.18	11.13	13.76	14.05	14.71
Wives					
M	101.74	97.69	95.76	95.56	96.49
SD	7.49	11.82	11.78	10.68	13.32
			Severity of Marital Problems		
Husbands					
M	53.05	55.51	54.80	52.05	53.73
SD	25.33	25.56	24.69	23.09	22.68
Wives					
M	49.82	53.44	53.45	54.65	51.54
SD	18.94	20.29	20.76	21.27	21.18

Note: For the measure of global marital happiness, the possible range was 16-111, with higher scores indicating greater happiness. For the measure of marital problems, the possible range was 19-209, with higher scores indicating more severe marital problems.

Table 2

Means and Standard Deviations for the Daily Diary Measures

	Average Daily Satisfaction	Variability in Daily Satisfaction *SD*	Total Positive Relationship Events	Total Negative Relationship Events	General marital climate	Total Active Coping Behaviors
Husbands						
M	18.52	1.84	29.47	6.79	.31	2.16
SD	2.07	1.34	11.79	6.14	.37	2.16
Minimum	11.40	.00	3.00	.00	.00	.00
Maximum	21.00	5.22	52.00	31.00	1.50	9.00
Wives						
M	18.73	2.00	32.42	6.37	.21	2.20
SD	1.86	1.31	10.72	6.37	.16	1.84
Minimum	12.60	.00	7.00	.00	.00	.00
Maximum	21.00	5.96	54.00	21.00	.65	7.00

Note. Scores for total positive relationship behaviors, total negative relationship behaviors and total active coping behaviors represent the total number of behaviors reported across the entire 10-day period.

Table 3

Within-spouse and Between-spouse Correlations for Time 1 Variables

	1	2	3	4	5	6	7	8
(1) Initial Marital Happiness	**.46****	-.53**	-.37**	.58**	.34**	-.35**	-.35**	-.14
(2) Initial Marital Problems	-.54**	**.10**	.36**	-.46**	-.14	.52**	.42**	.41**
(3) Variability in daily relationship satisfaction	-.22	.25*	**.56****	-.72**	-.23*	.54**	.51**	.33**
(4) Average daily relationship satisfaction	.53**	-.40**	-.69**	**.54****	.43**	-.51**	-.56**	-.31**
(5) Total positive relationship events	.19	-.12	-.16	.41**	**.62****	-.11	-.52**	.17
(6) Total negative relationship events	-.18	.13	.55**	-.26**	.11	**.65****	.76**	.69**
(7) Marital Climate	-.27*	.19	.57**	-.37**	-.31**	.87**	**.56****	.41**
(8) Total coping behaviors	-.19	.06	.45**	-.23**	.14	.61**	.49**	**.55****

Note: Husbands' correlations are above the diagonal and wives' correlations are below. The diagonal (in bold) contains between-spouse correlations. $^{+}p<.10$, *$p<.05$, **$p<.01$, ***$p<.001$.

Table 4

Marital Climate as a Moderator of the Within-person Association between Variability in Daily Relationship Satisfaction and Global Marital Happiness

	b	*SE*	*t*	95% CI LL	UL
Initial global marital happiness (Intercept)					
Average Daily Satisfaction	4.45	1.25	3.56***	2.00	6.90
Variability in Daily Satisfaction	-0.40	1.39	-0.29	-3.12	2.32
Marital Climate	1.01	2.67	0.38	-4.22	6.24
Interaction of variability and the marital climate	-3.97	1.73	-2.29*	-7.36	-0.58
Changes in global marital happiness (Slope)					
Average Daily Satisfaction	1.06	0.50	2.12*	0.08	2.04
Variability in Daily Satisfaction	0.50	0.45	1.12	-0.38	1.38
Marital Climate	-1.32	0.78	-1.69†	-2.85	0.21
Interaction of variability and the marital climate	1.16	0.39	3.00**	0.40	1.92

Note. All variables were standardized for analyses. All coefficients presented are pooled across gender. CI=confidence interval; LL=lower limit; UL=upper limit.
† $p < .10$,*$p < .05$, **$p < .01$, ***$p < .001$

Table 5

Simple Effects for Interactions between the Marital Climate and Variability in Daily Relationship Satisfaction Presented in Table 4

	b	*SE*	*t*	95% CI LL	95% CI UL
Results for initial global marital happiness					
Effect of variability in a negative marital climate (+1 SD)	-4.37	2.29	-1.91†	-8.86	0.12
Effect of variability in a positive marital climate (-1 SD)	3.57	2.16	1.66	-0.66	7.80
Effect of the marital climate at high variability (+1 SD)	-2.96	2.56	-1.16	-7.98	2.06
Effect of the marital climate at low variability (-1 SD)	4.98	3.71	1.34	-2.29	12.25
Results for changes in global marital happiness					
Effect of variability in a negative marital climate (+1 SD)	1.67	0.68	2.44*	0.34	3.00
Effect of variability in a positive marital climate (-1 SD)	-0.66	0.49	-1.34	-1.62	0.30
Effect of the marital climate at high variability (+1 SD)	-0.16	0.60	-0.27	-1.34	1.02
Effect of the marital climate at low variability (-1 SD)	-2.49	1.08	-2.31*	-4.61	-0.37

Note. All variables were standardized for analyses. All coefficients presented are pooled across gender. CI=confidence interval; LL=lower limit; UL=upper limit.
†$p<.10$, *$p<.05$.

Table 6

Marital Climate as a Moderator of the Within-person Association between Variability in Daily Relationship Satisfaction and Marital Problems

	b	*SE*	*t*	95% CI LL	95% CI UL
Initial severity of marital problems					
Average Daily Satisfaction	-8.90	2.31	-3.85***	-13.43	-4.37
Variability in Daily Satisfaction	0.94	3.31	0.28	-5.55	7.43
Marital Climate	2.66	3.07	0.87	-3.36	8.68
Interaction of variability and the marital climate	9.40	4.66	2.02*	0.27	18.53
Changes in severity of marital problems					
Average Daily Satisfaction	-0.44	0.61	-0.72	-1.64	0.76
Variability in Daily Satisfaction	-0.92	0.68	-1.36	-2.25	0.41
Marital Climate	1.68	0.59	2.83**	0.52	2.84
Interaction of variability and the marital climate	-2.39	0.62	-3.87***	-3.61	-1.17

Note. All variables were standardized for analyses. All coefficients presented are pooled across gender. CI=confidence interval; LL=lower limit; UL=upper limit.
*p<.05, **p<.01, ***p<.001.

Table 7

Simple Effects for Interactions between the Marital Climate and Variability in Daily Relationship Satisfaction Presented in Table 6

	b	*SE*	*t*	95% CI LL	95% CI UL
Results for initial severity of marital problems					
Effect of variability in a negative marital climate (+1 SD)	10.34	5.78	1.79†	-0.99	21.67
Effect of variability in a positive marital climate (-1 SD)	-8.46	5.66	-1.50	-19.55	2.63
Effect of the marital climate at high variability (+1 SD)	12.06	5.18	2.33*	1.91	22.21
Effect of the marital climate at low variability (-1 SD)	-6.74	5.96	-1.13	-18.42	4.94
Results for changes in severity of marital problems					
Effect of variability in a negative marital climate (+1 SD)	-3.31	0.92	-3.59***	-5.11	-1.51
Effect of variability in a positive marital climate (-1 SD)	1.47	0.91	1.61	-0.31	3.25
Effect of the marital climate at high variability (+1 SD)	-0.72	0.60	-1.19	-1.90	0.46
Effect of the marital climate at low variability (-1 SD)	4.07	1.05	3.86***	2.01	6.13

Note. All variables were standardized for analyses. All coefficients presented are pooled across gender. CI=confidence interval; LL=lower limit; UL=upper limit.
†$p<.10$, *$p<.05$, ***$p<.001$.

Table 8

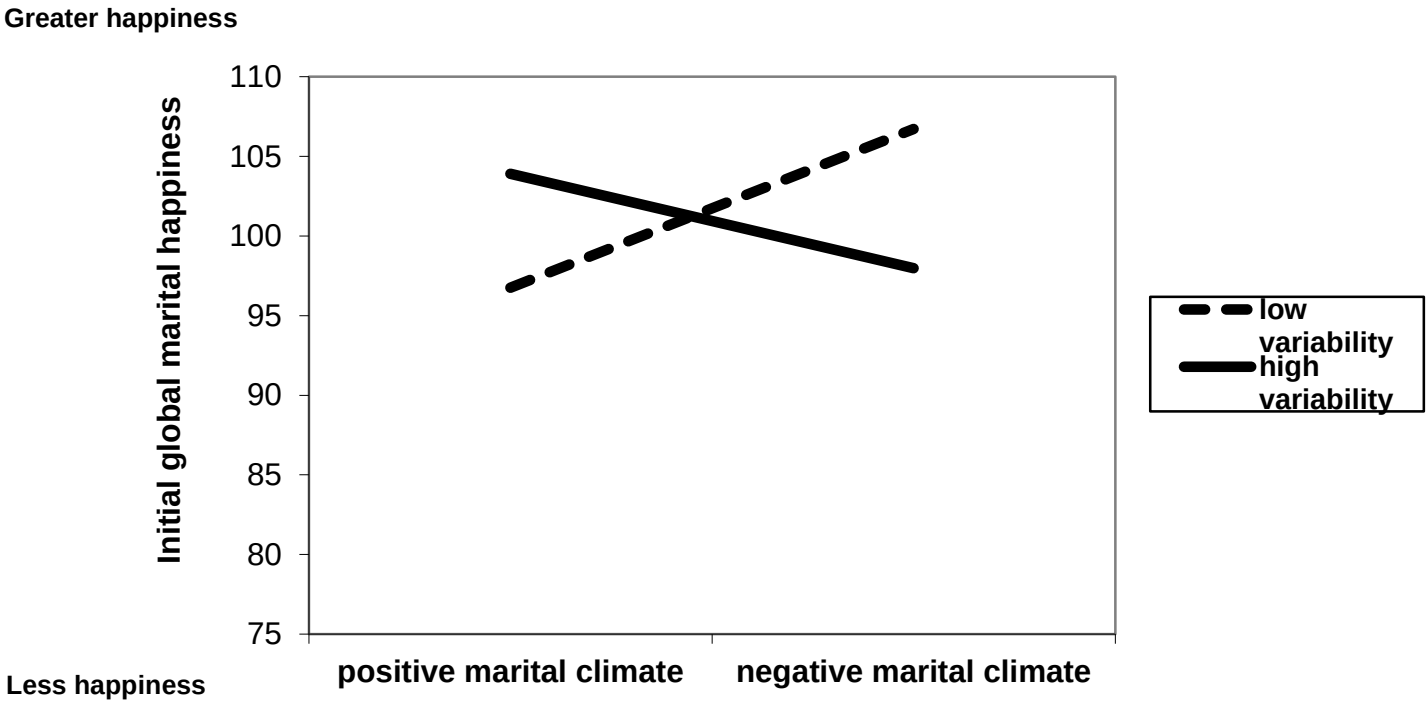
Marital Climate as a Moderator of the Between-person Association between Variability in Daily Relationship Satisfaction and Positive Marital Coping Behaviors

	b	*SE*	*t*	95% CI LL	UL
Positive Marital Coping Behaviors					
Average Daily Satisfaction	0.05	0.20	0.26	-0.34	0.44
Variability in Daily Satisfaction	0.44	0.25	1.71†	-0.05	0.93
Marital Climate	0.81	0.33	2.48**	0.16	1.46
Interaction of variability and the marital climate	0.09	0.27	0.33	-0.44	0.62

Note. All variables were standardized for analyses. All coefficients presented are pooled across gender. CI=confidence interval; LL=lower limit; UL=upper limit.
†$p<.10$, **$p<.01$.

Figure 1

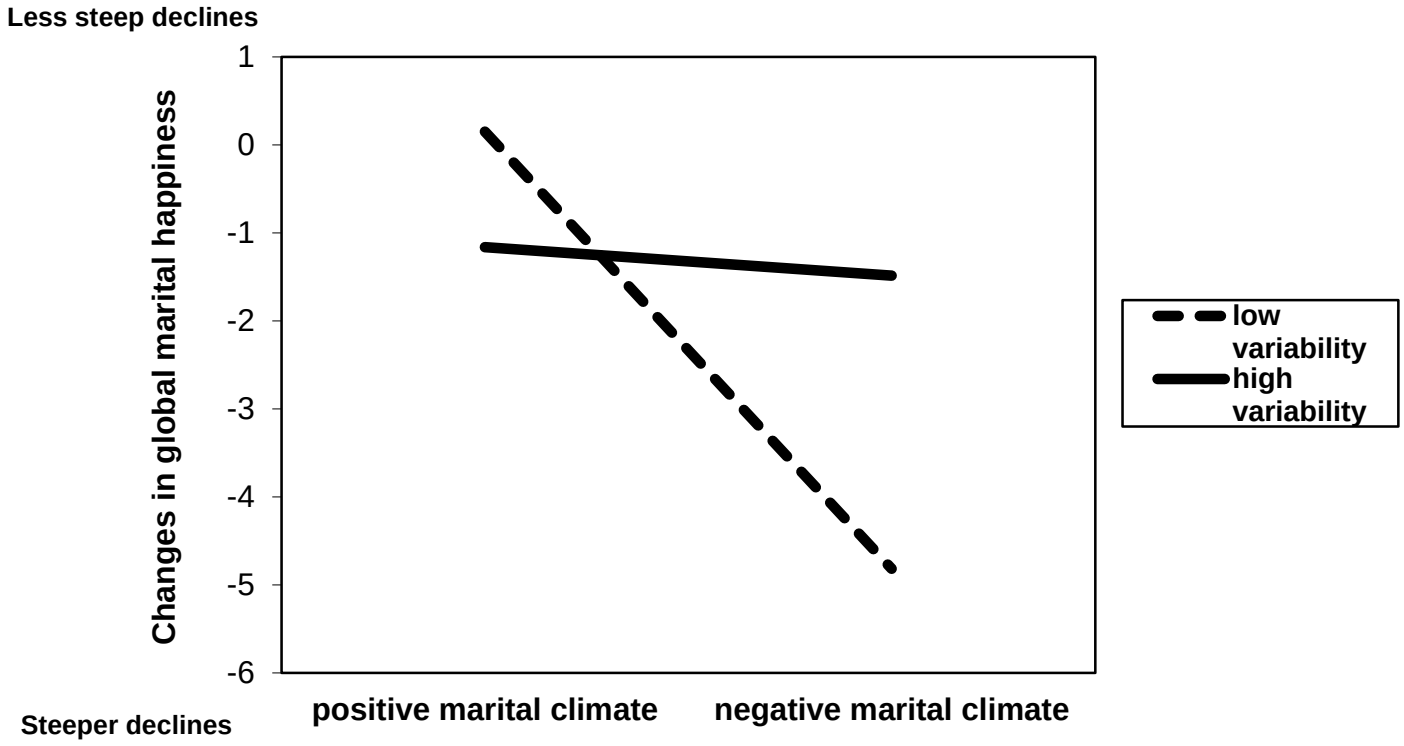
Interaction of the Marital Climate and Variability in Daily Relationship Satisfaction on Initial Global Marital Happiness



Note. To produce these predicted means, variability in daily relationship satisfaction and the marital climate were standardized. Global marital happiness was left on its original metric.

Figure 2

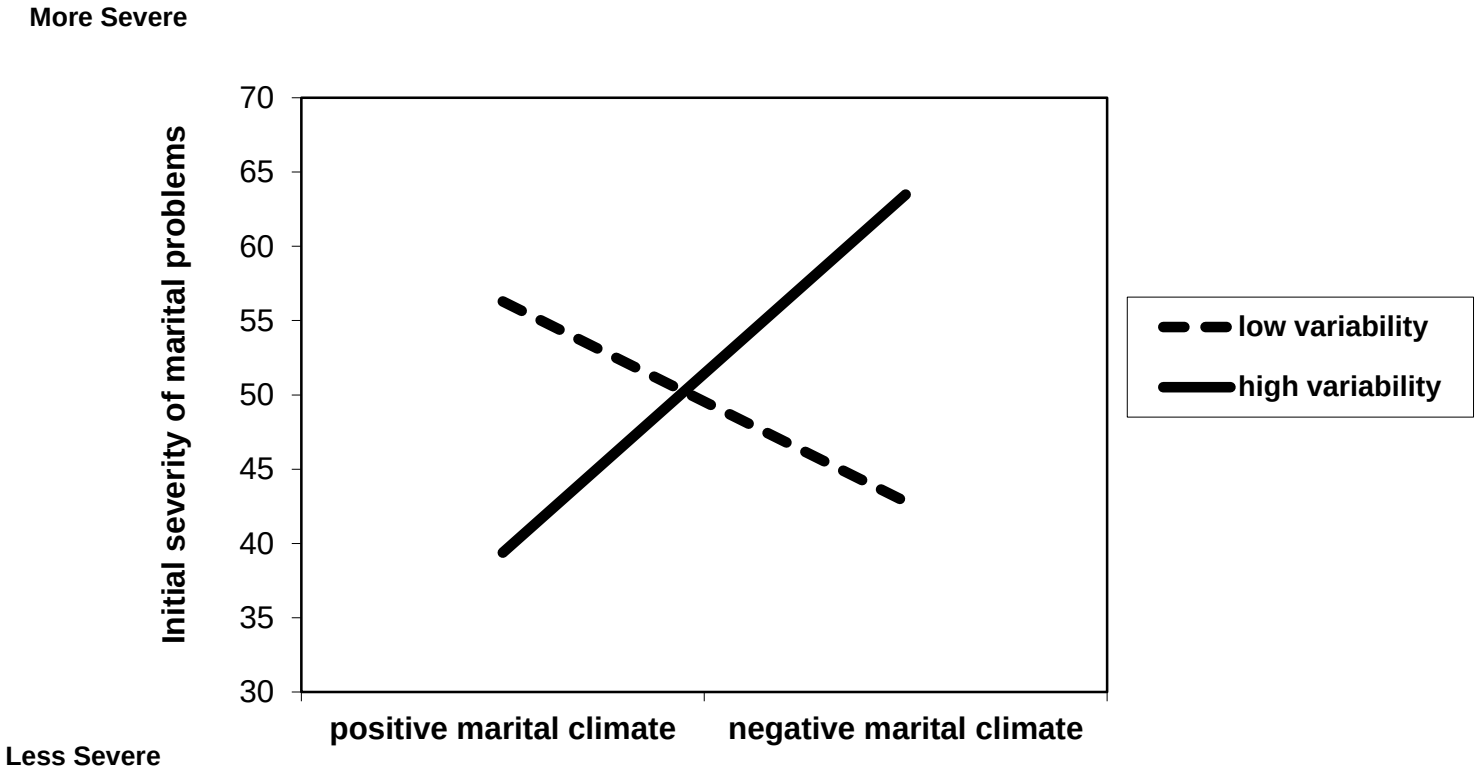
Interaction of the Marital Climate and Variability in Daily Relationship Satisfaction on the Trajectory of Global Marital Happiness Over Time



Note. To produce these predicted means, variability in daily relationship satisfaction and the marital climate were standardized.

Figure 3

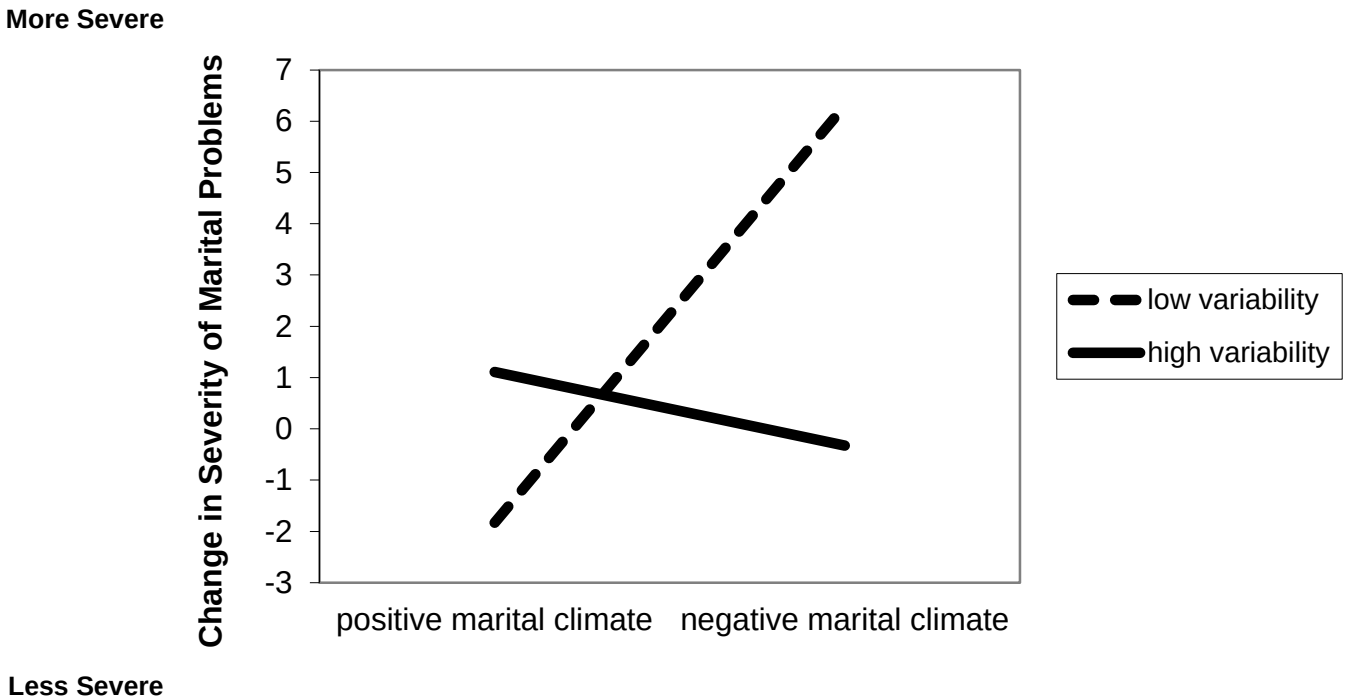
Interaction of the Marital Climate and Variability in Daily Relationship Satisfaction on Initial Severity of Marital Problems



Note. To produce these predicted means, variability in daily relationship satisfaction and the marital climate were standardized. The severity of marital problems was left on its original metric.

Figure 4

Interaction of the Marital Climate and Variability in Daily Relationship Satisfaction on Changes in Severity of Marital Problems Over Time



Note. To produce these predicted means, variability in daily relationship satisfaction and the marital climate were standardized.

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